Remarks/Arguments

Applicants have received and carefully reviewed the Office Action of the Examiner mailed December 27, 2005. Claims 1-57 are pending. Reconsideration and reexamination are respectfully requested.

Rejections under 35 U.S.C. § 103(a)

Claims 1, 2, 4, 7-9, 19-22, 24, 27-29, 39-40, and 45-48 are rejected as being unpatentable over Miers (US 5,872,627). The Examiner acknowledges that Miers is silent regarding an actuator for moving the optical element relative to the flow stream such that light directed by the optical element is aligned with the current position of the core, however the Examiner asserts that Miers teaches another embodiment in which an actuator is used for moving an optical element. The Examiner then asserts it would have been obvious to use an actuator for moving the optical element relative to the flow stream for the purpose of accurately positioning the optical element at a desired location. Applicants respectfully traverse the rejection.

First, Applicants submit that the embodiment referenced by the Examiner for showing the use of an actuator for moving an optical element (FIGS. 11D, 49, 42, 43, column 2, lines 1-3, and reference numbers 520/866) does not appear to actually disclose an optical element being moved, as the Examiner suggests. Rather, Miers appears to teach the embodiment shown in FIGS. 42, 43, and 49 as a device in which a sample passes through a stationary disk 510 into a first aliquot loop 514 in a moving disk 530, and then into remaining aliquot loops dependent on how many assays are to be performed. See column 12, line 55 through column 13, line 6 and FIG. 55. Miers appears to teach that once the sample is loaded, the rotary actuator 550 rotates the moving disk 530 in order to align the aliquot loop 514 with reagent passageways 525, 526 in the stationary disk. See column 13, lines 7-21. Miers then appears to teach pumping reagent through the apparatus to transport the sample to the appropriate reaction chamber. See column 13, lines 21-25. Miers also appears to teach taking colorimeter measurements directly through the acrylic block 506 using a calorimeter assembly 121. See column 18, lines 42-43 and FIG.

61. Miers thus appears to teach an embodiment in which a portion of an apparatus containing sample channels or tubes is moved in order to combine the samples with appropriate reagents for performing various tests, and then transporting the sample/reagent mixture to a fixed optical detection chamber 593. In addition, Miers appears to teach performing the optical detection in the reaction chamber 593. See column 19, lines 23-30.

Notably, the cited embodiment of Miers that uses a moving sample transport system does not appear to involve a flow stream having a sheath fluid and a core having a current position within the flow stream. Furthermore, Miers does not appear to teach an embodiment in which an actuator moves an optical element relative to a flow stream such that light directed by the optical element is aligned with the current position of a core flow in a flow stream, as is recited in independent claim 1.

Similarly, with respect to independent claim 20, Miers does not appear to teach an embodiment having an actuator for moving a light source relative to the flow stream such that the light directed by the optical element is aligned with the current position of the core flow. Regarding independent claim 40, Miers does not appear to teach an embodiment having an actuator for moving the flow stream relative to the light source and optical element such that the light directed by the optical element is aligned with the current position of the core flow. Additionally, there does not appear to be any motivation, suggestion, or guidance for one of ordinary skill in the art to modify the teachings of Miers to achieve the instant invention. For the reasons set forth above, as well as other reasons, Miers does not appear to teach or suggest the elements of independent claims 1, 20, and 40, or the claims dependent thereon.

Claims 11-13, 15-17, 31-33, 35-37, 50-52, and 54-56 are rejected as being unpatentable over Miers in view of Sun et al. (US 6,091,537). The Examiner asserts that it would have been obvious to one of ordinary skill in the art to use an electrostatically actuated actuator for moving the optical element relative to the flow stream for the purpose of accurately positioning the optical element at a desired location. Applicants respectfully traverse the rejection. As stated above, Miers does not appear to teach or suggest the basic elements of independent claims 1, 20, or 40. Sun et al. does not appear to teach what Miers lacks. Thus, even if one were to combine

the teachings of Miers and Sun et al., one would not arrive at the claimed invention.

Allowable Subject Matter

On page 4 of the Office Action, the Examiner indicated that claims 3, 5-6, 10, 14, 18, 23, 25-26, 30, 34, 38, 41-42, 44, 49, 53 and 57 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the case claim and any intervening claims.

Conclusion

It is submitted that, in light of the above remarks, all pending claims 1-57 are in condition for allowance. Reconsideration and reexamination are respectfully requested. If a telephone interview would be of assistance, please contact the undersigned attorney at 612-359-9348.

Respectfully submitted,

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